tal. The more expensive cyclotron-produced fluorine-18 exchanges with the hydroxyl ion of the crystal.

Clinical studies show imaging with 99mTc-diphosphonate to be the most effective method for locating skeletal metastatic lesions. The use of the technetium-99m label results in decided improvement of resolution and overall image quality. In one series of 60 metastatic lesions, all were demonstrated by 99mTc-diphosphonate, while only 56 percent could be detected with 18F. Radiographic visualization was obtained in only 28 percent.

Both radionuclide and radiographic studies may be used when there are symptoms or laboratory evidence suggesting osseous metastasis, but the bone scan with 99mTc-diphosphonate is by far the more sensitive tool in discovering bone neoplasm and following the course of therapy.

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## The Importance of Recognition of Gastric Bezoars after Operation for Ulcer

Over the years it has become apparent that patients who have undergone Bilroth I and II procedures, either with or without vagotomy, have been noted to have masses presenting in the fundus of the stomach, even though they have been fasting for one or more days. On occasion this mass has been confused with a tumor and operation done on that account.

In the event that this was recognized as a bezoar there have been some initial attempts at surgical removal rather than the initial treatment of choice, which is to break up these soft food bezoars with gastroscopic instruments, followed by maintenance therapy with proteolytic enzymes. Following this, many of these patients can be controlled by dietary means alone.

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## One Method of Detecting Early Gastric Cancer by X-ray Examination

BECAUSE OF THE very high rate of gastric cancer in Japan, a method of detection of early lesions utilizing air-releasing granules, simethicone, and a double-contrast air and barium method of examination has been devised.

Through this method, cancers have been detected which are so small as to defy gastroscopic visualization. Operation on early lesions has yielded a cure rate approaching 90 percent.

The Japanese technique requires considerable practice and good patient cooperation, as well as good spot filming equipment. Because of the low rate of gastric cancer in this country and the high incidence of peptic disease, this method is not likely to replace conventional methods of examination, but certainly may supplement them in certain circumstances.

Scott-Harden, reviewing six years of experience with a double contrast technique in the general radiology department of Cumberland Infirmary, Carlisle, found it "most encouraging" in that it stood up well to endoscopic check. Such a method might be more simply adapted to routine practice.

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## Opportunistic Pulmonary Infections

THE IMMUNOLOGICALLY compromised host—for example, patients on immunosuppressive regimens after organ transplantation, or receiving steroids, or who have advanced malignant disease—is subject to a wide variety of "opportunistic" pulmonary infections, often caused by unusual infectious agents. The etiological agent must be identified as early as possible for prompt administration of appropriate therapy, since pulmonary infections in such patients progress rapidly and not infrequently result in death. The radiographic appearance of such opportunistic infection, although not specific or pathognomonic, can suggest "categories of infectious agents" to guide appropriate diagnostic endeavor or therapy pending results of cul-